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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,106	11/26/2003	Ronald S. Cok	86915RRS	1349

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EXAMINER	
LIANG, REGINA	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,106	COK ET AL.	
	Examiner	Art Unit	
	Regina Liang	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-19,22-25,27-34 and 36* is/are pending in the application.

4a) Of the above claim(s) *37-43* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-19,22-25,27-34 and 36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office Action is responsive to amendment filed 6/26/07. Claims 1-4, 6-19, 22-25, 27-34, 36 are pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1-4, 7-10, 14, 17, 18, 23-25, 29-34, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 2003/0052865) in view of Burger et al (US 2005/0116026 hereinafter Burger) and Mohan Rao (US 5,701,270).

As to claim 1, Fig. 1 of Miller discloses a display system comprising: a display (100); a memory (101) with image content stored in the memory, and a display controller (102) adapted to read the memory and to cause the display to present the image content.

Miller does not disclose the memory is a write-once memory. However, using a write-once memory in a display system is well known in the art such as taught by Burger (see element 212 in Fig. 2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the memory of Miller to be a write-once memory as taught by Burger because the write-once memory has advantage of allowing the user to store the information and preventing the viewer to modify the viewing information from the write-once memory.

Miller as modified by Burger does not disclose the display controller and the write-once memory are combined in a single integrated circuit. However, Mohan Rao teaches a display controller and an associated memory are fabricated together as a single integrated circuit chip with high yields thus reduced device cost (col. 4, lines 8-13, col. 6, lines 4-6). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller as modified by Burger to fabricate the display controller and the write-once memory in a single integrated circuit as taught by Mohan Rao thereby increasing chip yield so as to reduce the device cost.

It is noted that Miller as modified by Burger and Mohan Rao does not disclose the write-once memory and the display controller are mounted on the back of the display. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display system of Miller as modified by Burger to mount the write-once memory and the display controller on the back of the display, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

As to claim 2, Miller teaches the display is a flexible display (line 4 in [0030]).

As to claim 3, Miller teaches the display is a flat panel display (LCD or LED).

As to claim 4, Miller teaches the display system comprising an interface (touch screen). Thus, Miller as modified by Burger would have an interface to the write-once memory for writing the image content to the memory.

As to claim 7, Miller teaches the display is an OLED.

As to claim 8, Miller teaches the image content is at least one of motion image sequence, a still image, a group of still images and a stream of image information ([0012]).

As to claim 9, Miller teaches display system comprising an audio system (speaker 301 in Fig. 3) to generate audio signals based upon audio content stored in the memory and display controller ([0022]).

As to claim 10, Miller teaches the image content is customized (steps 401-403 in Fig. 4).

As to claim 14, Miller teaches the display is a color display.

As to claim 17, Miller teaches the display controller comprises a memory interface and display deriver ([0011]-[0013]).

As to claim 18, Miller teaches the system comprising an external interface (105, 106) adapted to received at least one of image content and audio content and to stored the received content in the memory ([0013]-[0014]).

As to claims 23-25, note the discussion of claim 1 above. Furthermore, it would have been obvious to one of ordinary skill in the art to modify Miller as modified by Burger and Mohan Rao to comprise more than one type of write-once memory with different capacity to provide both added convenience (be able to read different types of memory devices) and more information to the viewer.

As to claim 29, Miller as modified by Burger and Mohan Rao teaches a surface (back surface of the display) on which at least one of the memory and the display controller are mounted.

As to claims 30, 31, note the discussion of claim 1 above. Miller as modified by Burger and Mohan Rao teaches the method for assembling a display system as claimed.

As to claim 32, Miller teaches the step of receiving customized image content and writing the customized image content into the memory (steps 401-403 in Fig. 4).

As to claim 33, 34, 36, Miller teaches that the image content is obtained in a first form, and further comprising the steps of converting the image content into a second form, and writing the converted image content into the memory (e.g., converting the external information into the internal information).

4. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller, Burger and Mohan Rao as applied to claim 23 above, and further in view of Blotky et al (US 2002/0158810 hereinafter Blotky).

As to claim 27, Miller teaches the display system having a wallet-sized display card. Miller as modified by Burger and Mohan Rao does not explicitly disclose the display system takes the form of a tradable card. However, Blotky teaches a card size display system taking the form an electronic baseball card (inherent the baseball card is a tradable card; e.g. see [0002, 0008, 0010]). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify display system of Miller as modified by Burger and Mohan Rao to be in the form of a tradable card adapted to display still or moving images of baseball players or other sports-related personalities or sporting events ([0002] of Blotky) thereby allowing displaying and updating of the stored information.

As to claim 28, Blotky teaches the display system takes a form consistent with a sports card and wherein the image content in the memory has sports-related image content stored therein.

5. Claims 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller, Burger and Mohan Rao as applied to claim 1 above, and further in view of Gulsen (US 2003/0080929).

As to claims 15, 16, Miller as modified by Burger and Mohan Rao does not disclose the controller comprises a non-programmable logic circuit. However, Gulsen teaches a display controller of a display system comprising a programmable logic circuit or a non-programmable logic circuit (hardwired state machine, col. 2, line 64 to col. 3, line 7). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display controller of Miller as modified by Burger and Mohan Rao to comprise a non-programmable logic circuit since it is well known substitution of one type of logic circuit for another that's used for the display controller.

6. Claims 6, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller, Burger and Mohan Rao as applied to claim 1 above, and further in view of Huang et al (US 2001/0050666 hereinafter Huang).

As to claims 11-13, Miller teaches the display is a flat panel display. Miller as modified by Burger and Mohan Rao does not disclose the display is a passive-matrix or a reflective display. However, Huang teaches a LCD display comprising a passive-matrix ([0003]) or a reflective display ([0022]). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display of Miller as modified by Burger and Mohan Rao to have a passive-matrix or a reflective display since it is well known substitution of

one type of display for another and provides a video rate compatible, scan line free update capability.

As to claim 6, Huang teaches the display system comprising a timer (524 in Fig. 6).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Burger and Mohan Rao.

As to claim 13, Fig. 6 of Huang discloses a display system comprising: a display (100), wherein the display uses bi-stable cholesteric materials to form image ([0022], [0023]; a memory (502) with image content stored in the memory, and a display controller (500) adapted to read the memory and to cause the display to present the image content.

Huang does not disclose the memory is a write-once memory. However, Huang suggests other types of memory advantageously can be employed ([0063], [0092]), and using a write-once memory in a display system is well known in the art such as taught by Burger (see element 212 in Fig. 2). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the memory of Huang to be a write-once memory as taught by Burger because the write-once memory has advantage of allowing the user to store the information and preventing the viewer to modify the viewing information from the write-once memory.

Huang as modified by Burger does not disclose the display controller and the write-once memory are combined in a single integrated circuit. However, Mohan Rao teaches a display controller and an associated memory are fabricated together as a single integrated circuit chip with high yields thus reduced device cost (col. 4, lines 8-13, col. 6, lines 4-6). Thus, it would

have been obvious to one of ordinary skill in the art at the time the invention was made to modify Huang as modified by Burger to fabricate the display controller and the write-once memory in a single integrated circuit as taught by Mohan Rao thereby increasing chip yield so as to reduce the device cost.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gulsen in view of Burger and Mohan Rao.

As to claim 15, Fig. 6 of Gulsen discloses a display system comprising: a display (102); a memory (612) with image content stored in the memory, and a display controller (104) adapted to read the memory and to cause the display to present the image content, wherein the display controller is a non-programmable state machine (hardwired state machine, col. 2, line 64 to col. 3, line 7).

Gulsen does not disclose the memory is a write-once memory. However, using a write-once memory in a display system is well known in the art such as taught by Burger (see element 212 in Fig. 2). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the memory of Gulsen to be a write-once memory as taught by Burger because the write-once memory has advantage of allowing the user to store the information and preventing the viewer to modify the viewing information from the write-once memory.

Gulsen as modified by Burger does not disclose the display controller and the write-once memory are combined in a single integrated circuit. However, Mohan Rao teaches a display controller and an associated memory are fabricated together as a single integrated circuit chip

with high yields thus reduced device cost (col. 4, lines 8-13, col. 6, lines 4-6). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gulsen as modified by Burger to fabricate the display controller and the write-once memory in a single integrated circuit as taught by Mohan Rao thereby increasing chip yield so as to reduce the device cost.

9. Claims 19, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller, Burger and Mohan Rao, and further in view of Clapper (US 2003/0064353).

As to claim 19, Fig. 1 of Miller discloses a display system comprising: a display (100); a memory (101) with image content stored in the memory, and a display controller (102) adapted to read the memory and to cause the display to present the image content; a switch (108 in Fig. 1, 104 in Figs. 2, 3) for activating the display controller.

Miller does not disclose the memory is a write-once memory. However, using a write-once memory in a display system is well known in the art such as taught by Burger (see element 212 in Fig. 2). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the memory of Miller to be a write-once memory as taught by Burger because the write-once memory has advantage of allowing the user to store the information and preventing the viewer to modify the viewing information from the write-once memory.

Miller as modified by Burger does not disclose the display controller and the write-once memory are combined in a single integrated circuit. However, Mohan Rao teaches a display controller and an associated memory are fabricated together as a single integrated circuit chip

with high yields thus reduced device cost (col. 4, lines 8-13, col. 6, lines 4-6). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller as modified by Burger to fabricate the display controller and the write-once memory in a single integrated circuit as taught by Mohan Rao thereby increasing chip yield so as to reduce the device cost.

Miller as modified by Burger and Mohan Rao does not disclose the display system comprising a folded surface, and the operation of unfolding the surface actuates the switch. However, Fig. 1 of Clapper teaches a greeting card comprising a folded surface on which the memory and the card controller are mounted, and a hinge switch which is activated in response to the card being unfolded at the hinge ([0004], [0005]). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display system of Miller as modified by Burger and Mohan Rao to have a folded surface on which the memory and the controller are mounted and the feature of the operation of unfolding the surface actuates the switch as taught by Clapper so as to simulate a conventional greeting card operation and allow the user to display message upon activation of the switch.

As to claim 22, Miller teaches the system comprising an audio circuit to generate audio signals based upon audio content stored in the memory and the controller ([0022]).

Response to Arguments

10. Applicant's arguments with respect to claims 1-4, 6-19, 22-25, 27-34, 36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Regina Liang
Primary Examiner
Art Unit 2674

8/30/07